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EXAMINER

DEMICO, MATTHEW R

ART UNIT PAPER NUMBER

2611

DATE MAILED: 04/07/2004

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Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/614,617

Applicant(s)

COURTNEY ET AL.

Examiner

Matthew R Demicco

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 28 November 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16, 19-21 and 24-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-16, 19-21 and 24-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Response to Amendment***

1. This action is responsive to an amendment filed 11/28/03. Claims 1-16, 19-21 and 24-26 are pending. Claims 17-18 and 22-23 are cancelled. Claims 1-3, 9-16 and 21 are amended. Claims 24-26 are new. The objections to the drawings and specification are hereby withdrawn in light of the amendment.

***Response to Arguments***

2. Applicant's arguments with respect to claims 1, 10, 11, 17, 19 and 21 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 1-7, 9-13, 15-16 and 24-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,459,427 to Mao et al. in view of U.S. Patent No. 6,400,407 to Zigmond et al.

Regarding Claim 1, Mao discloses a method of identifying a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining a locator adapted for identifying a data stream (Col. 8, Lines 9-19), associating the locator

with one of a plurality of data streams (Col. 9, Lines 1-4), each one of the plurality of data streams being associated with one of a plurality of television channels (Col. 8, Lines 35-39), and mapping the locator to an IP address (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61) thereby enabling a tuner to read the one of the plurality of data streams associated with the locator. This reads on the claimed set of one or more IP addresses associated with one or more locators such that the IP addresses identify one or more of the plurality of data streams and reading the data streams by a tuner. What is not disclosed, however, is a set of one or more IP addresses that identify one or more network interface cards and reading data from a network by a network interface card identified by an IP address upon determination that the IP address does not correspond to a locator identifying a data stream. Zigmond discloses a method for embedding a URL within a television stream for an Internet-enabled set top box (See Abstract). The web television is enabled to browse the web, send e-mail and otherwise access the Internet using a standard modem or ISDN modem (Col. 5, Lines 14-33). The modems of Zigmond read on the claimed network interface cards. Accessing the Internet inherently requires communication via the TCP/IP protocol. This reads on the claimed reading data from a network by a network interface card identified by an IP address. Zigmond is evidence that ordinary workers in the art would recognize the benefits of having a network interface card in a web-enabled television using embedded URLs. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the network interface of Zigmond in order to provide for interactive content and bi-directional Internet communication which may not be available through the television

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service provider alone. In combination, it is inherent that the method of Mao in view of Zigmond be able to make a determination as to the source from which data should be received. This reads on the claimed determination that the IP address does or does not correspond to a locator identifying a data stream.

Regarding Claim 2, Mao in view of Zigmond disclose a method as stated above in Claim 1. What is not disclosed, however, is that the IP address is generated from a set of IP addresses reserved for use in private networks prior to mapping the locator to the IP address. Official Notice is hereby taken that it is well known in the art to generate and assign private IP addresses (such as 192.168.0.0/16) in a private IP network. Further, the use of a well-known protocol such as Dynamic Host Configuration Protocol (DHCP) performs the task of selecting and assigning an IP address from a set of reserved addresses for use in a private network. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao in view of Zigmond with the automatic IP assignment of the well-known prior art in order to simplify the delegation and management of a large number of private IP addresses in a private IP network.

Regarding Claim 3, Mao in view of Zigmond disclose a method as stated above in Claim 1. Mao further discloses a method wherein obtaining a locator inherently comprises some manipulation of the software code (Col. 4, Line 30) on which the system is running. The use of an object-oriented programming language (Col. 9, Lines 19-21) for such software is well known in the art. In such a language, it is inherent that objects, such

as variables and methods, are created. This reads on the claimed locator objected being instantiated.

Regarding Claim 4, Mao in view of Zigmond disclose a method as stated above in Claim 3. It is inherent in any type of computer programming that “objects” such as variables and methods take up space in memory. It is also well known that memory is finite, and therefore any objects must not be left “lying around” in memory and must be removed when no longer in use or else instability in the program may occur. This reads on the claimed “garbage collecting” of the locator object when it is no longer used.

Regarding Claim 5, Mao in view of Zigmond disclose a method as stated above in Claim 1. Mao further discloses that each of the plurality of data streams is associated with the same one of the plurality of television channels (Col. 7, Lines 43-44).

Regarding Claim 6, Mao in view of Zigmond disclose a method as stated above in Claim 3. Mao further discloses a method wherein each of a plurality of physical channels (Cols. 8-9, Lines 66-13) may contain a number of data channels (Col. 7, Lines 43-44). This reads on the claimed plurality of data streams are associated with two or more of the plurality of television channels (Col. 6, Lines 55-58).

Regarding Claim 7, Mao in view of Zigmond disclose a method as stated above in Claim 1. Mao further discloses that each of the data streams are associated with a single tuner (See Figure 6, 550). In the system of Mao, a single 6 MHz channel may carry the audio, video, and numerous data channels associated with the A/V channel.

Regarding Claim 9, Mao in view of Zigmond disclose a method as stated above in Claim 1. What is not disclosed, however, is that a private IP address is mapped to the

locator wherein mapping the locator to an IP address includes mapping the locator to the private IP address. Mao in view of the well-known prior art disclose the use of the DHCP protocol to allocate a private IP address for use in a private IP network as stated above in Claim 2. The locator is mapped to an IP address as stated above in Claim 1. Mao in view of Zigmond and further in view of the well-known prior art would therefore teach the claimed allocating a private IP address to be mapped to the locator.

Regarding Claim 10, Mao discloses a method of selecting a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining a data stream locator associated with a data stream (Col. 8, Lines 9-19), providing the data stream locator to an interface map (Col. 9, Lines 1-4 and Figure 5, 460-480), the interface map being adapted for mapping one or more data stream locators to one or more IP addresses (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61), and receiving an IP address associated with the data stream locator from the interface map (Col. 9, Lines 6-13). Mao further discloses a first set of IP addresses is associated with one or more data stream locators such that the first set of IP addresses identifies one or more data streams associated with one or more television channels as stated above in Claim 1. Mao also discloses enabling one or more tuners to read the data streams associated with the first set of IP addresses as stated above. What is not disclosed, however, is a set of one or more IP addresses that identify one or more network interface cards and enabling the network interface cards identified by the IP addresses to read data from a network. Zigmond discloses a method for embedding a URL within a television stream for an Internet-enabled set top box (See Abstract). The web television is enabled to browse the web,

send e-mail and otherwise access the Internet using a standard modem or ISDN modem (Col. 5, Lines 14-33). The modems of Zigmond read on the claimed network interface cards. Accessing the Internet inherently requires communication via the TCP/IP protocol. This reads on the claimed reading data from a network by a network interface card identified by an IP address. Zigmond is evidence that ordinary workers in the art would recognize the benefits of having a network interface card in a web-enabled television using embedded URLs. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the network interface of Zigmond in order to provide for interactive content and bi-directional Internet communication which may not be available through the television service provider alone.

Regarding Claim 11, Mao discloses a method of selecting a data stream (See Figure 5, 500) in a digital television receiver (See Figure 1, 150) comprising obtaining an IP address (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61), determining whether the IP address corresponds to a data stream locator associated with a data stream (Col. 8, Lines 9-19) and selecting the data stream associated with the data stream locator (Col. 9, Lines 6-13) when it is determined that the IP address corresponds to a data stream locator associated with a data stream by a tuner (Col. 9, Lines 1-4). Mao in view of Zigmond further disclose a method wherein a determination is made that the IP address does not correspond to a data stream locator associated with a data stream and data is read from a network by a network interface card identified by the IP address as stated above in Claim 1.



Regarding Claim 12, Mao in view of Zigmond disclose a method as stated above in Claim 11. Mao further discloses instructing a tuner to read the data stream associated with the data stream locator (See Figure 6).

Regarding Claim 13, Mao in view of Zigmond disclose a method as stated above in Claim 12. Mao further discloses instructing the tuner to read the data stream associated with the data stream locator comprises instructing a tuner that is tuned to the data stream (See Figure 6, 550) to read the data stream associated with the data stream locator (Col. 9, Lines 4-13).

Regarding Claim 15, Mao in view of Zigmond disclose a method as stated above in Claim 11. Mao in view of Zigmond and further in view of the well-known prior art disclose the use of the DHCP protocol as stated above in Claim 2. DHCP, as is well known in the art, provides for releasing the IP address for future use with the IP address is no longer being used. The IP address corresponds to a data stream locator associated with a data stream as stated above. While DHCP may not be necessarily used in such a system with data streams, the teachings of releasing an IP address for reuse when it is no longer being used is well known in the art as stated above.

Regarding Claim 16, Mao in view of Zigmond disclose a method as stated above in Claim 11. Mao further discloses that an interface map is responsible for mapping one or more locator objects to one or more IP addresses (Col. 9, Lines 1-4 and Figure 5, 460-480), each of the locator objects being associated with a data stream (Col. 8, Lines 41-45). Further, Mao in view of Zigmond and further in view of the well-known prior art disclose the use of the DHCP protocol as stated above in Claim 2. DHCP, as is well

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known in the art, provides for releasing the IP address for future use with the IP address is no longer being used. This reads on the claimed instructing the interface map to release the IP address for future use when the IP address is no longer being used. The IP address corresponds to a data stream locator associated with a data stream as stated above. While DHCP may not be necessarily used in such a system with data streams, the teachings of releasing an IP address for reuse when it is no longer being used is well known in the art as stated above.

Regarding Claims 24 and 25, see Claim 1 above.

Regarding Claim 26, see Claim 1 above. It is inherent in such a computer-based device that there be a processor and a memory adapted for executing instructions.

5. Claims 8 and 14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. in view of Zigmond et al. and further in view of U.S. Patent No. 6,510,557 to Thrift.

Regarding Claim 8, Mao in view of Zigmond disclose a method as stated above in Claim 1. What is not disclosed is that the plurality of data streams are associated with two or more tuners. Thrift discloses a Java-based television receiver (See Figure 1) that connects to the Internet (Col. 2, Line 39) and receives channel map information associating a given television channel signal with a URL (Col. 3, Lines 17-21). Further, Thrift discloses a channel map that associates channel number and URL (Col. 3, Lines 59-62). The system of Thrift also discloses the use of multiple tuner/decoders (Col. 3, Lines 7-8) to provide picture-in-picture display. Thrift is evidence that ordinary workers in the art would appreciate the usefulness of having two or more tuners in an interactive

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digital television receiver. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao in view of Zigmond with the multiple tuners of Thrift in order to display multiple channels of video and/or interactive data simultaneously.

Regarding Claim 14, Mao in view of Zigmond disclose a method as stated above in Claim 12. Further, Mao in view of Zigmond and further in view of Thrift disclose a method wherein a plurality of tuners are used to provide a picture-in-picture display as stated above. It is inherent in such a system that only one tuner is used when a single channel is being displayed. When a second video or interactive data channel is requested simultaneously, the second tuner is then used. This reads on the claimed instructing a tuner that is currently unused to read the data stream associated with the data stream locator.

6. Claims 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Mao et al. in view of U.S. Patent No. 6,580,722 to Perlman.

Regarding Claims 19 and 20, Mao discloses a method of selecting multicast IP data (Col. 5, Lines 32-53 and Cols. 7-8, Lines 63-3) transmitted in broadcast streams (Col. 4, Lines 38-46) comprising obtaining an IP address (Cols. 7-8, Lines 63-3 and Col. 6, Lines 58-61), determining whether the IP address corresponds to a data stream locator associated with a data stream (Col. 8, Lines 9-19) and selecting the data stream associated with the data stream locator (Col. 9, Lines 6-13) when it is determined that the IP address corresponds to a data stream locator associated with a data stream (Col. 9, Lines 1-4).

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Further disclosed is a method for specifying an IP address as stated above, that the tuner is instructed to read a data stream associated with the address from when the address corresponds to a data stream locator as stated above in Claim 13. If there is no embedded multicast data in a particular channel, it is inherent that the video program is displayed (See Figure 6, 560) without any supplemental data. This reads on the claimed otherwise instructing a network card (tuner) to read data from the network. What is not disclosed, however, is a method for specifying a multicast group address associated with the IP address and receiving packets addressed to the multicast group address. Perlman discloses a method for multicasting data wherein a multicast group address is specified in order to conserve router resources (Col. 1, Lines 51-67). Specifically the amount of resources used by a router in a multicast group is limited by the size of the multicast group (Col. 3, Lines 34-37). Perlman is evidence that those of ordinary skill in the art would recognize that without using multicast address grouping, all nodes on a network would receive the multicast data, which would greatly increase the complexity and resource requirements for routing the data in a large network. It is inherent that such multicasting could be through an IP protocol as in Mao, and therefore the multicast group address would be associated with an IP address. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the method of Mao with the multicasting group address of Perlman to conserve routing resources by directing multicasts to only specific nodes in a designated group. This reads on the claimed method for specifying a multicast group address associated with an IP address and receiving packets addressed to the multicast group address.

Regarding Claim 21, Mao in view of Perlman disclose a method of selecting multicast IP data transmitted in broadcast streams as stated above in Claim 19. Further, Mao discloses obtaining an IP address, the IP address having been mapped to an associated data stream locator identifying a data stream associated with a television channel as stated above in Claims 1 and 11. A determination that the IP address is mapped to a data stream locator identifying a data stream associated with a television channel must be made in order to receive the data transmission. It is further inherent that in such a multicasting transmission scheme, a multicast group address must be specified. Mao also discloses instructing the tuner to read a data stream associated with the data stream locator as stated above in Claim 12. It is inherent that the tuner would receive the packets of the data stream that are addressed to the multicast group address. Mao in view of Perlman also disclose specifying a multicast group address associated with the data stream and receiving packets addressed to the multicast group address as stated above in Claim 19.

### ***Conclusion***

7. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Matthew R Demicco whose telephone number is (703) 305-8155. The examiner can normally be reached on Mon-Fri, 9am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrew Faile can be reached on (703) 305-4380. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

MRD

mrdr  
February 10, 2004

  
**VIVEK SRIVASTAVA**  
**PRIMARY EXAMINER**